

Protocol for the Observation of Instructional Practices

**Mathematics
(Grades K-8)**

Core Action 1: Ensure the work of the lesson reflects the shifts required by the CCSS for Mathematics.					
<p align="center">Indicator</p> <p>The lesson focuses on grade-level cluster(s), grade-level content standard(s) or part(s) thereof.</p>	1	2	3	4	Notes
	The lesson focuses only on mathematics outside the grade-level standards.		The lesson focuses only on mathematics within the grade-level standards.		
<p align="center">Indicator</p> <p>The lesson intentionally relates new concepts to students' prior skills and knowledge.</p>	1	2	3	4	Notes
	No connections are made to students' prior skills and knowledge.		The lesson explicitly builds on students' prior skills and knowledge and students articulate these connections.		
<p align="center">Indicator</p> <p>The lesson intentionally targets the aspect(s) of rigor (conceptual understanding, procedural skill and fluency, application) called for by the standard(s) being addressed.</p>	1	2	3	4	Notes
	The lesson targets aspect(s) of rigor that are not appropriate for the standard(s) being addressed.		The lesson explicitly targets aspect(s) of rigor called for by the standard(s) being addressed.		
<p align="center">Indicator</p> <p>The lesson reflects the full intent of the grade-level cluster(s), grade-level content standard(s) or part(s) thereof being addressed.</p>	1	2	3	4	Notes
	The lesson superficially or only partially reflects the standard(s) being addressed.		The lesson fully reflects all aspects of the standard(s) being addressed.		
Core Action 2: Employ instructional practices that allow all students to master the content of the lesson.					
<p align="center">Indicator</p> <p>The teacher uses explanations, representations, and/or examples to make the mathematics of the lesson explicit.</p>	1	2	3	4	Notes
	Teacher instruction is limited to showing how to get the answer.		Teacher instruction goes beyond showing how to get the answer.		
<p align="center">Indicator</p> <p>The teacher poses high quality questions and problems that prompt students to share their developing thinking about the content of the lesson.</p>	1	2	3	4	Notes
	Questions and problems do not prompt students to share their developing thinking.		Questions and problems prompt students to share their developing thinking.		

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<p align="center">Indicator</p> <p>The teacher provides time for students to work with and practice grade-level problems and exercises.</p>	1	2	3	4	Notes
	Students are given limited time to work with grade-level problems and exercises.		Students are given extensive opportunity to work with grade-level problems and exercises.		
<p align="center">Indicator</p> <p>The teacher uses variation in students' solution methods to strengthen other students' understanding of the content.</p>	1	2	3	4	Notes
	A single solution method is provided and discussed.		A variety of student solution methods are shared and examined together to support understanding.		
<p align="center">Indicator</p> <p>The teacher checks for understanding throughout the lesson, using informal, but deliberate methods (such as questioning or assigning short problems).</p>	1	2	3	4	Notes
	There are few or no checks for understanding, or understanding of only a few students is assessed.		Checks for understanding are used throughout the lesson to assess progress of all students.		
<p align="center">Indicator</p> <p>The teacher guides student thinking toward the focus of the lesson and summarizes the mathematics with references to student work and discussion.</p>	1	2	3	4	Notes
	The lesson concludes with no summary of its focus.		The mathematics of the lesson is summarized with reference to student work and discussion.		
<p>Core Action 3: Provide all students with opportunities to exhibit mathematical practices in connection with the content of the lesson.</p> <p>Scale: 1 = The teacher does not provide students opportunity and very few students demonstrate this behavior 2 = The teacher provides students opportunity inconsistently and few students demonstrate this behavior 3 = The teacher provides students opportunity consistently and some students demonstrate this behavior 4 = The teacher provides students opportunity consistently and all students demonstrate this behavior.</p>					
<p align="center">Indicator</p> <p>The teacher uses strategies to keep all students persevering with challenging problems.</p>	1	2	3	4	Notes
	<p align="center">Illustrative Student Behavior</p> <p>Even after reaching a point of frustration, students persist in efforts to solve challenging problems.</p>				
<p align="center">Indicator</p> <p>The teacher establishes a classroom culture in which students explain their thinking.</p>	1	2	3	4	Notes
	<p align="center">Illustrative Student Behavior</p> <p>Students elaborate with a second sentence</p>				

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	(spontaneously or prompted by the teacher or another student) to explain their thinking and connect it to their first sentence.				
Indicator	1	2	3	4	Notes
The teacher orchestrates conversations in which students talk about each other’s thinking.	Illustrative Student Behavior Students talk about and ask questions about each other’s thinking, in order to clarify or improve their own mathematical understanding.				
Indicator	1	2	3	4	Notes
The teacher connects students’ informal language to precise mathematical language appropriate to their grade.	Illustrative Student Behavior Students use precise mathematical language in their explanations and discussions.				
Indicator	1	2	3	4	Notes
The teacher has established a classroom culture in which students choose and use appropriate tools when solving a problem.	Illustrative Student Behavior Students use appropriate tools strategically when solving a problem.				
Indicator	1	2	3	4	Notes
The teacher has established a classroom culture in which students choose and use appropriate tools when solving a problem.	Illustrative Student Behavior Students use appropriate tools strategically when solving a problem.				
Indicator	1	2	3	4	Notes
The teacher asks students to explain and justify work and provides feedback that helps students revise initial work.	Illustrative Student Behavior Student work includes revisions, especially revised explanations and justifications.				

Adapted from www.achievethecore.org